

**Amendments to the Specification:**

On page 7, please replace the paragraph starting at line 11 with the following amended paragraph:

~~FIGs. 18A and 18B illustrate~~ FIG. 18 illustrates in a diagram form an optical synapse processing unit (OSPU) used as a processing element in accordance with the present invention;

On page 25, please replace the paragraph starting at line 20 with the following amended paragraph:

An OSPU unit in accordance with the present invention is shown in diagram form in ~~Fig. 18A and 18B~~, as Fig. 18 as a three-port device taking input from a radiation source S, and distributing it along any of two other paths, designated C (short for camera) and D (for detector). Different scanning modes of the OSPU are considered in more detail in Section III.B. below.

**Amendments to the Drawings**

The attached sheet of drawings includes changes to Fig. 18 B, where the label Fig. 18B has been changed to Fig. 18. This sheet, which includes amended Fig. 18 and Fig. 19, replaces the original sheet, which included Figs. 18B and 19.

Attachment: Replacement Sheet  
Annotated Sheet Showing Changes